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Phenomenology of Men with Body Dysmorphic Disorder Concerning Penis Size Compared
to Men Anxious About Their Penis Size and to Men without Concerns Controls: A Cohort
Study.

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Abstract

Men with body dysmorphic disorder (BDD) may be preoccupied with the size or shape of the penis, which may be causing significant shame or impairment. Little is known about the characteristics and phenomenology of such men and whether they can be differentiated from men with small penis anxiety (SPA) (who do not have BDD), and men with no penile concerns. Method: Twenty-six men with BDD, 31 men with SPA, and 33 men without penile concerns were compared on psychopathology, experiences of recurrent imagery, avoidance and safety-seeking behaviours. Results: Men with BDD had significantly higher scores than both the SPA group and no penile concern group for measures of imagery, avoidance, safety seeking and general psychopathology. Discussion: The groups differed on the phenomenology of BDD specific to penile size preoccupation clearly from the worries of SPA, which in turn were different to those of the men without concerns. The common avoidance and safety seeking behaviours were identified in such men that may be used clinically.

Keywords: Body dysmorphic disorder; Penis size; Phenomenology; Small penis syndrome.

Phenomenology of Men with Body Dysmorphic Disorder Concerning Penis Size Compared to Men Anxious About Their Penis Size and to men without concerns: A Cohort Study.

Introduction

Men have different body image concerns compared to women, which are often related to masculinity. A survey in 2008 of 200 men showed their concerns were primarily about body weight, penis size and height (Tiggemann, Martins, & Churchett, 2008). Phillips and Diaz (1997) found gender differences in 188 patients with body dysmorphic disorder (BDD), in which men were more likely than women to be excessively concerned about muscle shape and the size of their genitalia - none of the women reported preoccupation with their genitals although BDD can occur in women seeking labiaplasty (Veale, Eshkevari, Ellison, et al., 2013; Veale, et al., 2014).

For men, penis size may be regarded as a sign of masculinity and sexual prowess. Men may be fearful of negative evaluation by a sexual partner, or by other men in changing rooms or showers (termed “external shame”). A few men may experience a negative self-evaluation of the aesthetics of their genitalia (termed “internal shame”) and be less concerned about evaluation from others (Veale & Lambrou, 2002). Men generally view penis size as more important than women do. Thus, in a large internet survey of 52,031 heterosexual men and women, 85% of women were satisfied with their partner’s penis size, but only 55% of men were satisfied with their own penis size and 45% wanted it to be larger (Lever, Frederick, & Peplau, 2006).

Small penis anxiety (SPA) (also known as “small penis syndrome”) has been described in the literature in men who have a normal sized penis but are excessively worried about its size (Wylie & Eardley, 2007). Some men who present with such worries may be diagnosed with body dysmorphic disorder (BDD) (American Psychiatric Association, 2013).

Individuals with BDD are preoccupied with a perceived defect in their physical appearance that is not observable or appears only slight to others. They must also experience clinically significant distress or impairment in social, occupational, or other important areas of function. DSM-5 (American Psychiatric Association, 2013) has added a further criterion to DSM-IV requiring that at some point during the course of the disorder, the individual has performed repetitive behaviours (e.g., mirror checking or excessive grooming) or mental acts (e.g., comparing his or her feature with others) in response to the concerns. The preoccupation in BDD is usually with several features of the face. Occasionally in men it is focussed on their penis size (Phillips & Diaz, 1997; Phillips, Menard, Fay, & Weisberg, 2005; Veale, Boocock, et al., 1996). It is important to identify BDD in a clinical setting, as it is associated with a high rate of psychiatric hospitalisation, suicidal ideation and completed suicide (Phillips, et al., 2005). It is not known how many men presenting to urologists or sexual medicine clinics with worries about penis size meet the diagnostic criteria for BDD. A number of surgical studies have described men seeking phalloplasty augmentation as having “penile dysmorphic disorder” (PDD) or “penile dysmorphophobia” but these were not based on any structured diagnostic interview for BDD or a validated screening scale (Li, et al., 2006; Perovic, et al., 2006; Spyropoulos, et al., 2005). Many of their participants may not have had BDD. In this study the authors refer to men formally diagnosed with BDD, in whom the size or shape of the penis is their main if not their exclusive preoccupation, which is causing significant distress and shame or impairment.

The current paper also defines men with Small Penis Anxiety (SPA) as being anxious or dissatisfied with their penis size but not meeting diagnostic criteria for BDD. For example, they may experience distress by the size of their penis but not be preoccupied by it for more than an hour a day or it may not be significantly distressing or interfering in their life. The definition of SPA or BDD with penile concerns would exclude men who have a micropenis

(Wylie & Eardley, 2007). Augmentation surgery might be considered for a penis < 6 cm in the flaccid state. This is based on 2 standard deviations below the mean for age (Wessells, Lue, & McAninch, 1996).

Little is known about how men with BDD focused on penile size cope with the shame about their penis size and how they are different from those with SPA (besides meeting criteria for a diagnosis of BDD). There is an extraordinary lack of scientific interest in men ashamed about their penis size with no studies on the phenomenology or characteristics of such men. However, there is no lack of “solutions” on the Internet. Most men are too ashamed to seek medical help and visit Internet sites that promote non-evidence based lotions, pills, exercises or penile extenders (Gontero, et al., 2009). Men may seek help from urologists or plastic surgeons, and may be offered fat injections or a surgical procedure to try to increase the length or girth of their penis. However, cosmetic phalloplasty is still regarded as experimental without any adequate outcome measures or evidence of safety (Ghanem, Glina, Assalian, & Buvat, 2013). Furthermore, the diagnosis of BDD may be associated with a poor outcome in most cosmetic procedures (Crerand, Menard, & Phillips, 2010; Phillips, Grant, Siniscalchi, & Albertini, 2001; Tignol, Biraben-Gotzamanis, Martin-Guehl, Grabot, & Aouizerate, 2007; Veale, De Haro, & Lambrou, 2003). Therefore, a surgeon who offers phalloplasty to men with BDD would be unwise. There are no controlled trials or case series of any psychological intervention for men with BDD with penile concerns or SPA, although there is some preliminary evidence that psycho-education and counseling about the normal range of penile length and poor outcomes associated with penile lengthening surgery can dissuade men from pursuing these procedures (Ghanem, et al., 2007; Shamloul, 2005). It is not known whether such counselling reduced the degree of preoccupation and distress in such men or whether they still pursue other non-evidence based solutions. Therefore, our aim was to conduct a study to determine the phenomenology. Our hypothesis was that men with BDD

could be differentiated from those with SPA and from those men without concerns over penis size. This may help to develop an understanding of maintenance factors in BDD or SPA.

Method

The study consisted of a cohort group design comparing men with BDD specifically focused on penile appearance concerns against men with SPA and men without concerns who did not report any concerns with their penis size.

Participants

All men were recruited from one of three sources: (a) by email to staff and students at King's College London ($n = 36$), (b) by email to the Mind Search database of volunteers at the Institute of Psychiatry, Kings College London ($n = 10$) and (c) by a link on the website "Embarrassing Bodies" ($n = 44$). Embarrassing Bodies is an informative television programme aired on Channel 4 in which members of the public present to a doctor with physical and medical concerns (often rare or unusual). The programme has its own website on which members of the public can both learn about the body and related illnesses as well as post queries to professionals. The authors approached the producers who organised for an advertisement and study contact details to be posted on the website. In total, 90 participants were included in the study. The demographic data are shown in Table 1. The inclusion criteria were that the men had to be aged 18 or above and proficient in English in order to provide consent and complete online survey questionnaires. Our exclusion criteria were men who:

- (1) Had a micropenis (defined as 4 cm or less in the flaccid state)
- (2) Had a penile abnormality (e.g., Peyronie's disease, hypospadias, intersex, hypospadias, phimosis)
- (3) Had had penile or prostatic surgery (which may affect penis size)

The Queen Square NHS Research Ethics Committee granted ethics permission (Reference 11/LO/0803).

Procedure

Advertisements for participants sought to recruit men to a study that was interested in their beliefs about their penis size. After completing the questionnaires on line, men who expressed any concerns or worries about their penis size were interviewed by a trained research worker with the Structured Clinical Interview for DSM-IV disorders (SCID) (First, Spitzer, Gibbon, & Williams, 1995). DSM-IV was used as the study commenced before publication of DSM-5. Those who were diagnosed with BDD were interviewed with both the SCID and the Brown Assessment of Beliefs Scale (Eisen, et al., 1998), in order to determine whether or not they had a delusional BDD. If the participant did not have any concerns about penis size, they were enrolled in the men with no concerns group. The researchers did not conduct a SCID for the men with no concerns, as we were only interested in the presenting diagnoses and comorbidity relating to the main complaint in the BDD and SPA groups.

Participants came to King's College Hospital outpatient urology department for examination to exclude a diagnosis of a micropenis or other penile abnormalities. On arrival, participants completed a consent form and were then given privacy in an air-conditioned consulting room at a constant temperature (21°C) at sea level. Using a disposable tape measure, each participant was measured in the flaccid state from pubis to distal glans (bone-to-tip).

Twelve men were unable to attend the clinic. In order to exclude a micropenis (that would exclude them from the study), they were sent instructions on how to administer self-measurement and email the results to the researchers and to self-report any penile abnormalities (e.g., curvature).

All participants were compensated with a £10 gift voucher for their participation in the research.

Materials and Methods

All participants completed the following questionnaires online.

Demographic information. Information was collected on age, marital status, ethnic origin, and employment status.

Cosmetic Procedure Screening Scale for BDD related to penile appearance (COPS-P) (Veale et al, in submission). The COPS-P is a 9-item scale (range 0-72) based on the original COPS for general appearance concerns (Veale, et al., 2011), which is validated as a screening questionnaire for identifying BDD in cosmetic settings. Higher scores reflect increased preoccupation and distress. The Cronbach's alpha value is .94 which indicates the measure has strong internal reliability (Veale, et al., in submission.). The Cronbach's alpha values from the current sample were .88, .77, and .40, for the BDD, SPA and men with no concerns groups, respectively. The COPS-P scale has a cut off score of 40, at which it yields highest kappa coefficient, sensitivity and specificity ($k = .819$) scores for discriminating between those with BDD, SPA, and men without concerns.

Beliefs about Penis Size (BAPS) (Veale, et al., 2014). The BAPS is a 10-item self-report scale (range 0-40) that measures beliefs about masculinity and shame about one's penis size. Two of the items measure internal self-evaluative beliefs such as feeling abnormal. Three items describe a social cognitive component with predictions such as being talked about by others. There are four items on anticipated consequences of a small penis size such as having to avoid situations where it would be normal or expected to be naked. Lastly, there are two items on extreme self-consciousness – for example, the belief that others will be able to see the size of the penis even when trousers are worn. A higher score on the BAPS therefore represents a greater level of insecurity and shame about penis size. Cronbach's

alpha for the scale was is .95. From the current sample Cronbach's alpha values were .84, .91, and .75, for the BDD, SPA and men with no concern groups, respectively.

Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983). Each subscale is comprised of seven items each for depression and anxiety and the range is 0 to 21 on each subscale. Higher scores represent increased severity of anxiety and depression. Cronbach's alpha for the HADS Anxiety have been found to range from .68 to .93, and for the HADS Depression from .67 to .90 (Bjelland, Dahl, Haug, & Neckelmann, 2002).

Social Phobia Inventory (SPIN) (Connor, et al., 2000). The SPIN is a 17-item self-report scale of social anxiety with a range of 0-68. Higher scores represent increased severity of social and performance anxiety. It has a cut-off score of >19 for a diagnosis of social anxiety disorder. The Cronbach's alpha for the scale ranges from .82 to .94 (Connor, et al., 2000), indicating strong internal reliability of the measure. The current sample gave Cronbach's alpha values of .93, .93, and .94, for the BDD, SPA and control groups, respectively.

Body Image Quality of Life Inventory (BIQLI) (Cash & Fleming, 2002; Hrabosky, et al., 2009). The BIQLI is a 19-item self-report scale that measures the impact of body image on various domains (for example, social functioning, and sexuality). Each item is rated on a 7-point Likert Scale, ranging from -3 (*very negative effect*) to +3 (*very positive effect*). The BIQLI is scored as an average numeric score of the 19 items where a more negative score reflects a more negative impact of body image. Cronbach's alpha for the scale has ranged from .93 to .96 across studies on men, indicating that the scale has strong internal reliability (Cash & Grasso, 2005). Within the current study Cronbach's alphas were .47, .99, and .99, for the BDD, SPA and control groups, respectively.

Avoidance and safety-seeking behaviours and anticipated anxiety. A checklist of avoidance and one of safety seeking behaviours related to the genitalia were drawn from

those commonly occurring in BDD (Lambrou, Veale, & Wilson, 2012). The authors modified the items to relate to the penis and generated additional items after interviewing six men with BDD whose main preoccupation was with their penis, before commencing the study. The final avoidance checklist consisted of eight items and the final safety seeking behaviour checklist consisted of 16 items. Participants rated the items on a Likert scale of frequency ranging from 0 (*never*) through to 4 (*always*). Respondents had the opportunity to add any avoidance and safety seeking behaviours that were not already listed. Lastly, they were asked about the degree of anxiety they anticipated in various situations on a scale between 0 – 100 with 0 being “not anxious at all” and 100 as “total panic”. Cronbach’s alpha for the avoidance items were .75, .78, and .78, for the BDD, SPA and control groups, respectively. For the safety-seeking behaviour items, alpha values were .79, .84, and .78, respectively.

Imagery. Participants were asked if they experienced any recurring images or pictures in their mind about their penis or the reaction of others to it. If positive, they would be asked for further details to describe the image and whether it related to a past experience or anticipated future experience.

Statistical Analysis

Data were analysed using SPSS v20. Given the non-normal distribution of most of these variables, as demonstrated from Kolmogorov-Smirnov tests, non-parametric parameters and comparison tests (Kruskall-Wallis, Mann-Whitney-*U* tests) are reported to compare continuous variables that were non-parametric across groups. Pearson’s Chi-square was calculated across groups, comparing marital status, employment status, education level, ethnicity, and sexual orientation. All tests were two tailed. Where one comparison is made alpha levels were set at 0.05; however, where multiple post-hoc comparisons were made, a Bonferroni correction has been used to reduce type 2 error using an alpha value of 0.017.

Results

All the participants were identified as being in the normal range for penis size. None fulfilled criteria for a micropenis (Wessells, et al., 1996). The flaccid length measurements in all the participants ranged from 7 to 13 cm.

Baseline Characteristics and Demographic Comparisons

Twenty-six participants reached diagnostic criteria for BDD and were categorized in the BDD group. The most frequently reported impairment in the BDD group was with sexual relationships and private leisure activities (such as exercising or swimming).

Thirty-one participants expressed anxiety about a small penis size (the SPA group) but did not fulfil criteria for a diagnosis of BDD. Thirty-three participants did not have any concerns with the size, shape or general appearance of their penis and therefore were classified as the control group. Of those with SPA, 24 (77.4%) met none of the criteria for BDD because they were thinking about their size for under an hour a day and could still continue to function socially and occupationally, 2 (6.5%) met one criterion for “preoccupation”, and 8 (25.8%) met one criterion for experiencing “clinically significant distress of impairment in social, occupational or other areas of functioning”. Eight men with SPA (25.8%), during the interview, indicated that in the past they would have responded more positively on the criteria for BDD but that changed circumstances (e.g., entering into a long-term relationship; no longer having to have communal showers at school, or gaining sexual experience) had improved their outlook.

Men with PDD were significantly older than the men with SPA and men without concerns ($H(2) = 14.40, p < .01$) (Table 1). However, there were no significant differences between the groups for marital status, education status or ethnicity. Men with BDD were more likely to be concerned about both flaccid and erect size than men with SPA, who were more concerned about either flaccid *or* erect size (Fisher’s Exact Test $p < .01$).

Ten (38.5%) of the BDD group fulfilled criteria for a delusional disorder in DSM-IV or “no insight” specifier in DSM-5. The BDD group was more likely to have psychiatric comorbidity than the SPA group (Fisher’s Exact Test $p < .05$). In fact, a diagnosis of depressive episode, social phobia or general anxiety disorder, were the most common, respectively.

Men in the BDD and SPA group were more likely to express concern with their testicles and other appearance concerns than the control group. Sixty-six per cent of all other appearance concerns were related to masculinity (height, build, muscle definition, body hair, head hair, and feature proportion).

Standardised Questionnaire Outcomes

The results of the standardised scales are shown in Table 2. Men with BDD had significantly higher scores than both the SPA group and control group for COPS-P ($H(2) = 59.88, p < .001$), BAPS ($H(2) = 53.01, p < .001$), the HADS Anxiety ($H(2) = 27.77, p < .001$) and HADS Depression ($H(2) = 28.42, p < .001$), SPIN ($H(2) = 31.48, p < .001$), and significantly lower BIQLI scores ($H(2) = 39.63, p < .001$). The SPA group scores were also significantly different to the control group scores, in the same direction for the specific measures of body image (COPS-P, BAPS and BIQLI). Non-significant differences were found between the SPA group and the control group for the HADS Depression, HADS Anxiety and SPIN (social anxiety) scores.

Avoidance Behaviours

Table 3 shows the frequency of avoidance behaviours, in order of most avoided by the BDD group. The BDD group avoided behaviours significantly more often than the SPA group or the control group. The SPA group avoided behaviours significantly more than often the control group, except “looking at my own penis” (e.g., in the shower) or “looking at pictures of naked men” in magazines or on the Internet.

Imagery

Twenty-three participants in the sample reported experiencing recurrent imagery. A significantly higher number of BDD participants ($n = 15$) experienced recurrent images related to their penis in comparison to SPA ($n = 7$) and control participants ($n = 1$), Fisher's Exact Test $p < .001$. Recurrent images experienced were categorized as either:

- (a) Flashbacks: Images of past disappointment, comments, or teasing expressed from others (e.g., "I often remember the moment when my ex-wife left me and told me I have a small penis");
- (b) Flash-forwards: Images of future anticipated disappointment, comments, or teasing expressed from others (e.g., "I think that a girl I try to start a relationship with will say it is too small");
- (c) Images of the physical appearance of their own penis (e.g., "I always see images of my own penis and it is so small");
- (d) Images of their partner being sexually intimate with other men who had a larger penis (e.g., "I picture my girlfriend having sex and really enjoying it with men who are all bigger than me").

There were no significant differences across the groups for type of imagery experienced, Fisher's Exact Test $p > .05$. The majority of recurrent images described involve others, and their reaction to their penis (11/15 in BDD, 6/7 in SPA, and 1/1 in the men with no concerns group).

Two men with BDD spontaneously reported that their concerns about penis size were related to memories of being exposed to either the penis of their father or a male sexual abuser during early childhood. Comparatively, they considered their own developed size to be much smaller than the perceived penile size of the other.

Safety-Seeking Behaviours

The frequency of safety seeking behaviours in each group is shown in Table 4. They are shown in order of largest effect size between BDD v men without concerns. The BDD group engage in significantly more safety seeking behaviours than the control group, apart from “visiting massage parlours/ escorts”, as very few of the BDD group engage in this behaviour.

The SPA group were engaging in most of the safety-seeking behaviours compared to the men with no concerns group with the exception of “trimming their pubic hair”; “wearing a bulge penis”; “checking their penis by feeling it with their fingers”, or “trying to convince others about how small it is”.

Levels of Anxiety

Levels of anxiety felt by each group, when exposed to potentially anxiety provoking situations are shown in Table 5 in order of most anxiety provoking for men with BDD. The BDD group reported significantly higher anxiety than the SPA and men with no concerns groups for all situations. The SPA group also reported significantly higher anxiety than men without concerns for all situations apart from “Wearing pants and loose trousers in public”. Participants in both the BDD or SPA groups specified a number of other additional situations that they commonly avoid or find anxiety provoking. These situations were having conversations about sex, jokes about penile size, using a public urinal, public sexual groping and being naked in front of a sexual partner when they are flaccid (rather than erect).

Participants in the BDD and SPA groups experienced high levels of shame related to taking part in the study as many participants used false identities during the recruitment procedure, repeatedly did not turn up to measurement appointments, and from the penile measurement procedure confirmed that it was a very anxiety provoking experience for participants.

Discussion

This is the first controlled study to describe the characteristics of men with BDD concerned with their penile size compared to men with SPA and a group with no concerns. The study enabled clear differentiation between the phenomenology of BDD as being different from the worries of SPA, which in turn was different to men without concerns about penis size. The differences were across all domains of images, beliefs, avoidance and safety seeking behaviours. The main differences between BDD focused on penile appearance and SPA were in the degree of avoidance behaviour and level of anxiety experienced and slightly less in the frequency of safety-seeking behaviours.

The men with BDD were in many ways similar to those with classic BDD in which there are often multiple concerns around the body. The main difference to classic BDD was that 62.5% of the BDD group had appearance concerns other than their penis, which were mainly related to testicular size and other features of masculinity. This is similar to BDD with muscle dysmorphia (C. G. Pope, et al., 2005; H. G. Pope, Gruber, Choi, Olivardia, & Phillips, 1997). This suggests that the sub group of muscle dysmorphia in DSM-5 is more related to masculinity rather than muscle size.

In the BDD group there was frequent comorbidity, with the most common being depression, social phobia and general anxiety disorder. These results are similar to previous surveys of BDD (Phillips, et al., 2005; Veale, Boocock, et al., 1996). The BDD group was more likely to be older. Some ageing processes, such as skin loosening, and weight gain around the pubic fat pad could mask their true penis size. In addition, with age, participants may have maintained longer periods of avoidance, and safety-seeking behaviours, making them more entrenched. One might have perhaps expected higher rates of single participants within the BDD or SPA groups if they were avoiding intimacy; further research is required on the sexual behaviour of such men.

The BDD group exhibited higher frequency of intrusive imagery in comparison with the SPA group and men with no concerns group. People with BDD commonly experience a distorted image or “felt impression” of their appearance, usually in the visual modality from an observer perspective but also from physical sensations (Osman et al, 2004). These are commonly associated with emotional memories that are associated with a current sense of threat as they have lost their context and have not been emotionally processed (Veale & Gilbert, 2014). When the memories are emotionally processed and cognitively appraised as related to a past experience or just an image, it is easier to engage and test the theory that a body image problem is present by the use of behavioural experiments.

The authors were able to derive a comprehensive checklist of avoidance and safety seeking behaviours that may assist clinicians, as they are likely to need to be targeted in Cognitive Behavior Therapy (CBT). These are thought to be important maintaining factors along with cognitive processes such as being excessively self-focussed and ruminating about penis size and past experiences (such as being teased or humiliated). The anxiety provoking situations can be broadly categorised into (a) displaying a flaccid penis in public situations (for example being seen by other men in changing rooms or wearing a swimming costume) and (b) displaying a flaccid or an erect penis with a sexual partner. Most of the safety seeking behaviours can be divided into either threat detection or monitoring (for example checking by feeling with one’s fingers or measuring the size) and avoidance and camouflage (e.g., changing one’s posture to avoid their penis being seen) (Veale, Eshkevari, Kanakam, et al., 2013). Interestingly, some of the anxiety provoking situations such as looking at one’s own penis are also safety-seeking behaviours to check on the size, suggesting that while the results are not reassuring there is always the hope that the penis may prove bigger than expected.

The main limitation of the study is that the sample was one of opportunity. Our sample may not therefore be representative of men who present to urologists, cosmetic

surgeons or sexual health or psychiatric services. However, such men are extremely ashamed and are unlikely to seek help from a conventional care pathway. They are still significantly impaired in the quality of life. Our sample may be more representative of men in the community who are searching for solutions on the Internet or going to private surgeons (who may be less likely to participate in research, or more likely to offer treatments without an evidence base). The opportunity sample may also have influenced the finding of what some might consider lower comorbidity in those with BDD in comparison to comorbidity found in clients with BDD drawn from clinical settings (Phillips, Nierenberg, Brendel, & Fava, 1996). Our sample is not only limited by opportunity but it is also limited by size. Future research could replicate the study using a larger sample of men recruited from urology clinics in order to provide more definitive outcomes that could generalize to a wider population. In addition, as men with BDD were significantly older than other men, our groups differed significantly in age at baseline. In future, groups could be as matched at baseline to reduce the covariance of age influencing the results. However, one of the aims of this study was to determine where differences might lie and it appears that the BDD group may be older or have more chronic symptoms.

The authors used the diagnostic criteria for DSM-IV (as DSM-5 had not been published when the study began). However, we do not believe that the extra criterion of repetitive behaviour at some time would have made any significant difference to the diagnosis of BDD. Those with an additional diagnosis of delusional disorder in this study would in DSM-5 have a specifier of “absent insight/ delusional beliefs”.

Twelve out of 90 (13.3 %) men provided a self-measurement of their penis in order to exclude a micropenis. It is possible that some of these men may be minimizing a small size but this would be a very large exaggeration to reach the criterion for a micropenis. Testicular size was not measured and it is possible that participants in the BDD or SPA group had

abnormally small testicles. Given the nature of data collection and cultural and social notions of normality, participants' responses on the questionnaires may have been subject to social desirability bias.

The study used two new outcome measures (the COPS-P and BAPS) that can be used for routine audit and research for any psychosocial or physical intervention in men with SPA or BDD. Of note, whilst a limitation of the study was that participants were recruited from a community sample, a proportion of men communicated reluctance in accessing help. There are no physical solutions for this population but there is a significant industry of surgery or potions that feeds on the fears of such men.

BDD can be treated with cognitive behaviour therapy (CBT) that is specific for BDD (Veale, et al., in press; Veale, Gournay, et al., 1996; Wilhelm, et al., 2013) or a Selective Serotonin Reuptake Inhibitors (SSRIs) (Phillips, Albertini, & Rasmussen, 2002). However, there have not been any specific trials of CBT or a SSRI in men with BDD with penile concerns or SPA. Our clinical impression is that such men are more difficult to engage and treat compared to those with other types of BDD. For example, it may be more difficult in therapy to help such men to test out their fears in a sexual relationship and they may be more entrenched in their beliefs and avoidant behaviours. SSRIs may also reduce libido and interfere with male orgasmic function. This study can however help to conceptualise the role of imagery and other behaviours to evaluate a specific psychological intervention.

Men may also experience a number of barriers to receiving adequate treatment help for their concerns. An initial struggle overcoming apprehension to disclose a concern to a professional can subsequently be met by either a refusal to acknowledge the problem as psychological or as severe enough to warrant a referral. Such a reaction could be having a detrimental effect on pre-existing impairments. Those who had received treatment commonly reported dissatisfaction with the intervention. For example, some participants from the study

commented that their doctor had conceptualised their concern as solely physical (namely erectile dysfunction or lower urinary tract symptoms). In addition, some participants mentioned difficulty in accessing CBT that is specific for BDD and had been offered only pharmacotherapy, group therapy or a generic form of CBT. It is important that clinicians (primarily urologists, psychiatrists and psychotherapists) are made aware of BDD and SPA and recognise the distressing impact of both, but are also then able to differentiate between the two before individualising therapy.

Dissemination of our findings can be used to educate practitioners on the characteristics of men with BDD and SPA, so that their care can be adequately validated, and ultimately taken seriously as a psychological problem that causes significant impairment. The majority of men stated they would prefer to speak to a woman about their concerns but some expressed a strong preference for a male therapist. Further research is required on testicular concerns, which were common in our population: almost nothing is known about men's attitudes to their testicular size. Lastly, further research is required on the social and developmental risk factors for BDD focused on penile appearance and SPA.

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Table 1 *Demographic comparisons between BDD, SPA and, men without concerns groups*

	BDD group <i>n</i> =26	SPA group <i>n</i> = 31	Men without concerns <i>n</i> =33	Comparison
Mean age, (SD)	42.04 (10.01)	31.77 (10.61)	31.55 (12.61)	$H(2) = 14.40, p < .01$ BDD vs SPA $U = 491.00, Z = 3.15, p < .01, d = 0.98$ BDD vs no concerns $U = 634.00, Z = 3.13, p < .01, d = 0.91$ SPA vs no concerns $U = 519.00, Z = .101, p > .017, d = 0.01$
Marital status, <i>n</i> (%)				
Single	14 (53.8)	22 (71.0)	21 (63.6)	Fisher's Exact Test $p > .05$
Married / Long term relationship	12 (46.2)	9 (29.0)	12 (36.4)	
Employment, <i>n</i> (%)				
Unemployed	7 (26.9)	3 (9.7)	5 (15.2)	Fisher's Exact Test $p > .05$
Employed / Self-employed/ Student	19 (73.1)	28 (90.3)	28 (84.8)	
Ethnicity, <i>n</i> (%)				
White British	23 (88.5)	25 (86.2)	29 (87.9)	Fisher's Exact Test $p > .05$
Other	3 (11.5)	4 (13.8)	4 (12.1)	
Penis concern type, <i>n</i> (%)				
Flaccid	4 (15.4)	9 (30.0)		Fisher's Exact Test $p < .01$
Erect	2 (7.7)	10 (33.5)		
Both	20 (76.9)	11 (36.7)		
Testicles concern, <i>n</i> (%)	17 (65.4)	17 (54.8)	10 (31.2)	Fisher's Exact Test $p < .05$
Other appearance concern, <i>n</i> (%)	20 (76.9)	19 (63.3)	16 (50.0)	Fisher's Exact Test $p > .05$
Comorbidity, <i>n</i> (%)				
Depression	9 (34.6)	2 (6.5)		Fisher's Exact Test $p < .05$
Social Phobia	6 (23.1)	3 (9.7)		
General Anxiety Disorder	5 (19.2)	2 (6.5)		